

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS

1. (Currently amended) A short interfering RNA (siRNA) molecule that down regulates expression of a p65 subunit of NF-kappa-B gene by RNA interference, said siRNA molecule comprising a sense region and an antisense region and wherein said antisense region comprises a sequence complementary to an RNA sequence encoding the p65 subunit of NF-kappa-B and the sense region comprises a sequence complementary to the antisense region, ~~characterized in that wherein~~ said antisense region comprises a sequence substantially complementary to a sequence ~~chosen among~~ selected from a group consisting of SEQ ID [NOs.] NO:1, 2, 3 and 4 and wherein said antisense region comprises a sequence ~~chosen among~~ selected from a group consisting of SEQ ID [NOs.] NO:5, 6, and 8 or substantially homologous sequences thereof.
2. (Currently amended) The siRNA molecule of claim 1, wherein said sense region comprises a sequence ~~chosen among~~ selected from a group consisting of SEQ ID [NOs] NO:9, 10, and 12 or substantially homologous sequences thereof.
3. (Original) The siRNA molecule of claim 1, wherein said sense region and antisense region are covalently connected via a linker molecule.
4. (Original) The siRNA molecule of claim 1, wherein said linker molecule is a polynucleotide linker.
5. (Original) The siRNA molecule of claim 1, wherein said linker molecule is a non-nucleotide linker.

6. (Original) The siRNA molecule of claim 1, wherein said sense region comprises the sequence of SEQ ID [NO.] NO:9 and said antisense region comprises the sequence of SEQ ID [NO.] NO:5.
7. (Currently Amended) The siRNA molecule of claim 1, wherein said sense region comprises the sequence of SEQ ID [NO.] NO:10 and said antisense region comprises a sequence of SEQ ID [NO.] NO:6.
8. (Currently Amended) The siRNA molecule of claim 1, wherein said sense region comprises the sequence of SEQ ID [NO.] NO:12 and said antisense region comprises the sequence of SEQ ID [NO.] NO:8.
9. (Currently amended) The siRNA molecule of ~~any one of~~ claim[[s]] 1 [[– 8]], wherein said sense region comprises a 3'-terminal overhang and said antisense region comprises a 3'-terminal overhang.
10. (Currently amended) The siRNA molecule of claim 9, wherein said 3'-terminal overhang[[s]] ~~each~~ comprises[[ing]] 1 to 5 natural or modified nucleotides.
11. (Currently amended) The siRNA molecule of claim 9, wherein said antisense region 3'-terminal ~~nucleotide~~ overhang is complementary to RNA encoding p65 subunit of NF-kappa-B.
12. (Original) The siRNA molecule of claim 1, wherein said sense region comprises one or more 2'-O-methyl modified pyrimidine nucleotides.
13. (Original) The siRNA molecule of claim 1, wherein said sense strand comprises a terminal cap moiety at the 5'-end, 3'-end, or both 5' and 3' ends of said sense region.
14. (Original) The siRNA molecule of claim 1, wherein said antisense strand comprises one or more 2'-deoxy-2'-fluoro modified pyrimidine nucleotides.

15. (Original) The siRNA molecule of claim 1, wherein said antisense and/or sense strand comprises between one and up to and including five phosphorothioate internucleotide linkages at the 3' end of said antisense region.
16. (Original) The siRNA molecule of claim 1, wherein said antisense and/or sense strand comprises between one and up to and including five phosphorothioate internucleotide linkages at the 5' end of said antisense region.
17. (Currently amended) The siRNA molecule of claim 9, wherein said 3'-terminal nucleotide overhang[[s]] comprises ribonucleotides that are chemically modified at a nucleic acid sugar, base, or backbone.
18. (Currently amended) The siRNA molecule of claim 9, wherein said 3'-terminal nucleotide overhang[[s]] comprises deoxyribonucleotides that are chemically modified at a nucleic acid sugar, base, or backbone.
19. (Currently amended) The siRNA molecule of claim 9, wherein said 3'-terminal nucleotide overhang[[s]] comprises one or more universal base ribonucleotides.
20. (Currently amended) The siRNA molecule of claim 9, wherein said 3'-terminal nucleotide overhang[[s]] comprises one or more acyclic nucleotides.
21. (Currently amended) The siRNA molecule of claim 9, wherein said 3'-terminal nucleotide overhang[[s]] comprises nucleotides or non-nucleotides
22. (Original) An expression vector comprising a nucleic acid sequence encoding at least one siRNA molecule of claim 1 in a manner that allows expression of the nucleic acid molecule.
23. (Original) A mammalian cell comprising the expression vector of claim 22.
24. (Original) The mammalian cell of claim 23, wherein said mammalian cell is a human cell.

25. (Original) The expression vector of claim 22, wherein said siRNA molecule comprises a sense region and an antisense region and wherein said antisense region comprises sequence complementary to an RNA sequence encoding p65 subunit of NF-kappa-B and the sense region comprises sequence complementary to the antisense region.
26. (Currently amended) The expression vector of claim 22, wherein said siRNA molecule comprises two distinct strands having complementar~~[[it]]~~y sense and antisense regions.
27. (Original) The expression vector of claim 22, wherein said siRNA molecule comprises a single strand having complementary sense and antisense regions.
28. (Currently amended) A method of preventing, treating or alleviating NF-kappa-B dependent conditions in an individual, ~~which comprising~~~~[[es]]~~ ~~administrating~~ administering a therapeutically effective amount of and in a suitable pharmacological carrier, a siRNA compound of claim 1, in a suitable pharmacological carrier so that expression of the p65 subunit of NF-kappa-B is suppressed, thereby suppressing NF-kappa-B dependent processes.
29. (Currently amended) The method of claim 28, wherein the NF-kappa-B dependent condition is selected from cancer, cardiac disorders, ischaemia, and allergic/inflammatory diseases and conditions, including but not limited to wherein said allergic/inflammatory diseases and conditions are selected from the group consisting of asthma, allergic rhinitis, atopic dermatitis, psoriasis, rheumatoid arthritis, ulcerative proctitis, ulcerative colitis, Crohn's disease~~[[,]]~~ and septic shock~~[[,]]~~ ~~and other diseases or conditions that are NF-kappa-B dependent.~~
30. (Currently amended) A method of preventing, treating or alleviating NF-kappa-B dependent conditions in an individual, ~~which comprising~~~~[[es]]~~ ~~[[the]]~~ extracting~~[[on]]~~ ~~[[of]]~~ cells, tissue or entire organs from said individual; contacting the said cells, tissue or entire organs with a siRNA ~~compound~~ molecule of claim 1, ~~so that~~ whereby expression of the p65 subunit of NF-kappa-B is suppressed, thereby suppressing NF-kappa-B dependent processes; and reintroducing the same cells, tissues or organs back into said individual.

31. (Currently amended) The method of claim 30, wherein said method is used as a step in a treatment involving a procedure selected from a group consisting ~~[[one]]~~ of transplantation, graft, ~~[[or]]~~ and implantation.